

Amendments to the abstract

Please add the following new abstract:

A data transmission apparatus used in a multiple service ring includes at least two nodes coupled to at least one aggregate pipe and at least one tributary. The data transmission apparatus includes a tributary RX framer coupled to a tributary for deframing data frames received from the tributary and extracting a destination node address and a TX framer for encapsulating the destination node address and the data received from the tributary into frames of the multiple service ring and transmitting the same along an aggregate pipe to a downstream neighbor node in the ring. The data transmission apparatus also includes a RX framer for receiving and deframing data frames of the multiple service ring from a upstream neighbor node to obtain at least a destination node address and actual data, a filter for determining data frames for local node according to the destination node address, and a tributary TX framer for encapsulating the data frames for local node into tributary data frames and sending the tributary data frames to a corresponding tributary.